Published in final edited form as:

J Ethn Subst Abuse. 2008 ; 7(3): 237–257.

Dinosaur girls, Candy girls, and Trinity: Voices of Taiwanese Club Drug Users

Kit-Sang Leung¹, Jih-Heng Li², Wen-Ing Tsay³, Catina Callahan¹, Shu-Fen Liu³, Jui Hsu³, Lee Hoffer¹, and Linda B. Cottler¹

¹Washington University School of Medicine, Department of Psychiatry, Epidemiology and Prevention Research Group

²Department of Health, Taiwan

³National Bureau of Controlled Drugs, Taiwan

Abstract

Research among Asian MDMA users is rare. To evaluate the feasibility of a study on abuse/dependence on Ecstasy, two focus groups with users (n=12) and one with health professionals (n=7) were conducted in Taiwan. Major results included blatant human testing with “candy/dinosaur girls” and a specific sequence of use called “Trinity” (MDMA, Ketamine, and marijuana). “Head-shaked bars” and “KTVs” were public places where illegal behaviors were implicitly allowed. Depression after MDMA use was not reported. For future studies, participants suggested that MRI could be a strong incentive for young users to enhance willingness to participate. Cultural issues are discussed.

Keywords

Club drugs; MDMA; Ecstasy; Chinese; Focus Groups

INTRODUCTION

The International Narcotics Control Board 2002 report (International Narcotics Control Board [INCB], 2003) predicted that synthetic drugs such as MDMA (also known as Ecstasy) would become the mainstream of illicit drug abuse because of their easy production and cheap price. In the subsequent 2004 World Drug Report (United Nations Office on Drugs and Crime [UNODC], 2004), amphetamines, including methamphetamine and MDMA, surged as the second most abused drugs in the world, second only to marijuana, showing that the abuse of synthetic drugs became a new epidemic recently.

In the US, the National Survey on Drug Use and Health (NSDUH) found that the average age at initiation of Ecstasy in 2005 was 20.7 years (Substance Abuse and Mental Health Services Administration, 2006). The Monitoring the Future Study also found that, in 2005, 8.3% of college students and 14.9% of young adults (aged 19-28 years) reported using MDMA at least once. Past year MDMA use in this age group was found to be around 3% in the same study (Johnston et al, 2006). Another study using an expanded version of the Composite International Diagnostic Interview Substance Abuse Module (CIDI-SAM; Robins and Cottler, 1990) also showed that 63% of young MDMA lifetime users (a mean age of 19.3 years) reported

continuing to use the drug despite knowledge of physical or psychological harm, with 43% and 34% of them meeting DSM-IV criteria for dependence and abuse respectively (Cottler et al, 2001). Other studies on the rave culture and drug use showed that most of the rave participants were adolescents and young adults under 30 years of age (Parrott et al, 2001; Topp et al, 1999). In the past decade, rave culture and club drug use have gained popularity worldwide, even in Asia, due to the internet, satellite TV and movies. However, studies of club drug use among Asian populations are limited.

In Taiwan, where methamphetamine use has accelerated since the early 1990's, the introduction of rave culture and club drugs in the mid-90s has aggravated the drug problem. A small amount of MDMA (0.07 kg) was first seized in 1998 (Ministry of Justice, 2001; National Bureau of Controlled Drugs [NBCD], 2005). Since then, abuse of MDMA and other club drugs such as Ketamine, flunitrazepam (Rohypnol, also known as FM2) and amphetamines has been common in local rave parties and dance clubs. In 2004, the total amount of MDMA seizures reached 303.28 kg (Ministry of Justice, 2005).

Unlike the legal system in the US and some Western countries where possession of drugs or drug paraphernalia constitutes a crime, Taiwan's "Drugs Hazard Control Act" states that even the "use" of Schedule I and II drugs is a criminal offense. In Taiwan, amphetamine, methamphetamine, MDMA, marijuana and GHB are classified as schedule II drugs. Ketamine and flunitrazepam are schedule III drugs. A positive MDMA or other schedule I or II drug test result, either by blood or urine, can be used as evidence of drug use. Once convicted, the maximum penalty for using MDMA is 3 years' imprisonment, although the first-time offender may be released without being indicted. Although self-disclosure of illicit drug use is neither sufficient nor necessary for criminal conviction, drug users are generally afraid of revealing their drug use behaviors, lest it may cause them legal trouble. Despite the severe punishment for MDMA use, in less than 10 years, club drugs have already surpassed methamphetamine and heroin as the most popular illicit drug in the country (NBCD, 2005).

Although the problems of club drug use in Taiwan have been frequently mentioned in the local media, and government and education agencies have launched prevention campaigns, there is little research published on the use of club drugs in Taiwan. In 2002, a Taiwanese study reported a 1.15% positive detection of MDMA and 0.37% positive detection of marijuana metabolites among 2,994 urine samples from drug-related arrests in western Taiwan (Liu et al, 2002). Another study detected rates of MDMA and Ketamine as high as 76% and 47% among rave party participants (Lua et al, 2003). Recently, the NBCD analyzed 931 urine specimens collected from 12 cities and counties using REMEDi HS system (BIO RAD Co.) and found positive detection rates to be between 4 and 10% for MDMA and Ketamine, suggesting significant drug use in Taiwan, reaching usage rates of about one quarter that of opiates and amphetamines. Government published data show that nearly 11% of students using illicit drugs in 1990 reported using MDMA or Ecstasy; the prevalence of illicit drug use from 1992 to 1999 was 1.0% to 1.4% (NBCD, 2005). However, almost all of these Taiwanese data were collected from involuntary participants, such as police detainees, inmates, and clinical samples in government psychiatric facilities; data from voluntary participants have rarely been reported.

Past surveys on Taiwanese club drug users typically utilized quantitative instruments developed based on researchers' perspectives, while users' beliefs, perceptions, and experiences have never been examined from users' viewpoint. Since there may be discrepancies between users' and researchers' understandings of drug use related attitudes and experiences, the absence of users' input in the development of instruments is a limitation.

The present study aimed to explore the perceptions and experiences and cultural specific issues pertaining to Taiwanese club drug users and to inform the design and implementation of a

community-based drug use survey. A moderator's guide was developed to facilitate the discussion of topics that would inform the feasibility and acceptability of an epidemiological study that will include a neuroscience component (i.e., the MRI) for the first time. This study was also the first Phase of a National Institute on Drug Abuse (NIDA) funded project on MDMA and club drug use in Taiwan (i.e., the Collaborative MDMA and other Club Drugs Study).

METHOD

Recruitment Procedures

Three focus groups were conducted in November, 2004; two with club drug users (i.e., user groups) and one with health professionals.

Eligible participants for the user group were those between 15 and 30 years of age who reported using any combination of Ecstasy, GHB, rohypnol or Ketamine at least 5 times, and at least once in the past three months. Participants were recruited through the help of the local nonprofit organizations (NPOs), such as drug rehabilitation organizations. The recruitment process was monitored by the Washington University and NBCD research teams. With the help from local NPOs, 12 users participated in the present focus group study. They were told that they would be remunerated US\$20 for their time and effort.

For the recruitment of health professionals, invitation letters explaining the purpose of the present study were sent to various universities, hospitals, and counseling centers. Seven health professionals were recruited. As a conventional practice in Taiwan, health professionals were remunerated US\$60 for their time and effort.

Ethical Issues

As mentioned previously, illicit drug use is an extremely sensitive issue in Taiwan. In order to protect the participants from being harassed by the police and other authorities because of their voluntary disclosure of drug use, the research team solicited a "Certificate of Confidentiality" from the NBCD to ensure that no personal identifying information obtained in the study would be disclosed to anyone.

The original informed consent forms were developed by the US research team in English. Since the first language of Taiwan is Mandarin Chinese, or simply "Chinese", the informed consent forms were translated into Chinese by the first author. Back-translation was then conducted by an independent translator to ensure the accuracy of the Chinese version. The same translation-back-translation procedures were also applied to the translation of the NBCD's "Certificate of Confidentiality". Both the original and translated versions of the informed consent form and the "Certificate of Confidentiality" were reviewed and approved by the University's IRB and the Taiwan's Department of Health.

Group Composition

A maximum variation sampling strategy was used to include a cross-section of drug users by age to enable conceptual rather than statistical generalizations (Patton, 1990). The first user group was comprised of five males and two females, with a mean age of 25.6 (range 25-30) (See Table 1). Four males and one female were residents of a half-way house for drug users. One female and one male, were clients of counseling centers in the local community. For the second user group, nine individuals from the community presented for participation. However, four were under 18 years of age and did not have parental approval, and were excluded from the present study. The five eligible participants, three males and two females, had a mean age

of 19.8 (range 18-23) (See Table 1). The overall mean age of drug users was 24.3 (range 18-30) (See Table 1).

The health professional group was comprised of three social workers (two female and one male), a male psychiatrist, a female psychiatric nurse, a female high school counselor, and a female university professor in health education. All seven health professionals were directly involved either in the treatment of drug users, or in researching drug use problems.

Domains of Discussion

Five domains were investigated in the focus groups: 1) users' profiles, 2) drug effects, 3) acquisition and use, 4) addictive properties, and 5) recruitment strategies for a large scale survey (see Table 2). Questions centering on each topic were developed to facilitate interactions among group members. Although the same five domains were used in both the user and health professional groups, users were asked about their personal feelings and perceptions related to their own drug use experiences, while health professionals were asked to express their knowledge about club drug users and the current drug use situation in Taiwan.

Focus Group Procedures

For the convenience of the participants, the two user groups were conducted in a community facility located in a rural area in Hualien. Information about the purpose and procedures of the study and participants' rights were explained by research team staff before participants signed the informed consent forms. All participants were given a copy of the NBCD's "Certificate of Confidentiality". They were then asked to complete a short questionnaire on their demographics. Identity cards with unique letter-and-digit codes were given to the participants in lieu of their names in group discussions to further safeguard their confidentiality. In Group 1 (GI), "GI M1" to "GI M5" was the designated code representing the five males and "GI F1" and "GI F2" the two females, whereas in Group 2 (GII), "GII M1", "GII M2", and "GII M2" represented the three younger males and "GII F1" and "GII F2" the two females. The health professional group was conducted at NBCD.

The focus group discussions were conducted in Chinese with occasional use of a Taiwanese dialect. In addition to the moderator (KSL) and the assistant moderator, the principal investigator of the present study (LBC) also assisted in facilitating the discussion by clarifying points and asking additional questions. Non-verbal expressions of participants were observed and recorded unobtrusively by two Taiwanese note-takers. Discussions were recorded on digital audio recorders.

DATA ANALYSIS

Data analysis was performed by the moderator (KSL) and transcripts were analyzed using QSR NUD*IST version 6 and a grounded theory approach. The primary purpose of grounded theory is to generate explanatory models of human behavior that are grounded in the data (Glaser and Strauss, 1967; Glaser, 2002). Data derived from discussions and observations were summarized from the fieldnotes or verbatim transcriptions from the audio recordings. Relevant concepts were identified and codes were assigned to each segment of text that corresponded to the concept. The original Chinese verbatim transcripts were used; results of the analysis were then translated into English and were back-translated to check for the accuracy of translation as suggested by the literature (Twinn, 1998; Yelland and Gifford, 1995).

RESULTS

Results were categorized as follows: 1) profiles of users, 2) drug effects, 3) attitudes towards drug use, 4) harm reduction, 5) sources of information related to drug quality and drug testing, 6) drug acquisition, and 7) recruitment strategies.

The Profiles of Users

Three types of information were reported in relation to the profiles of club drug users in Taiwan, namely, general trends in club drug use, initiation of club drug, and patterns of club drug use.

General Trends—All three groups mentioned that club drugs were very popular, especially among high school and vocational training school students, as well as dropouts. Club drug use, particularly MDMA and Ketamine, was equally popular in both females and males.

GI M1: Yes, that's right. Evening school students have a higher drug use rate.

GIM4: Students from evening schools [i.e., vocational training school] tend to use drugs more.

Health professional (Female university professor): Past findings in our research showed that vocational training school students aged 15-16 years have a higher rate of drug use, including inhalant, amphetamine, glue, and MDMA... So we think that these students are particularly at risk.

It has long been recognized that so-called “Taiwanese gangsters” have been involved in drug trade, smuggling, and prostitution. However, drug use among “gangsters”, also called “hey-tao” (黑道) was only mentioned by the younger users.

The price of MDMA was relatively stable, at US\$8.60 per pill. Although it might increase slightly around holiday time, the reported price was lower than that reported in the US and Australia. A can or a bottle of Ketamine was about US\$28.60, and was commonly shared among three to four users. An ex-dealer in Group 2 reported that the “wholesale price” for MDMA was about 43 cents per pill. MDMA was mostly imported into Taiwan from other countries where it was re-manufactured before hitting the market.

When participants from the three groups were asked about changes in the prevalence of club drug use in Taiwan, opinions were diverse. While younger users said that the number of club drug users had decreased recently, older users perceived a steady increase. Health professionals did not provide opinion on this issue; instead, they cited government statistics suggesting an increase in use.

GII M2: I think now there are fewer people using MDMA than before.

GII F1, GII F2: Yes, fewer people now!

GI M3: I think there are more and more people who have started using it [MDMA], and there is a lowering of the users' mean age.

Initiation of Club Drug Use—New club drug users were typically introduced to the drugs by friends and classmates. Younger users described the mode of introduction as “yi-g-la-yi-g”, (一觸即發), which was similar to the English expression of “chain reaction”. Curiosity, experimentation, and fun were reported to be the most common reasons for initiation. Initially respondents stated that they did not perceive any pressure to use drugs, but decided to use them entirely of their own volition.

GII M2: I used it on my own decision.

GII F2: I am willing to take it, there no need for others to force you to do so. In fact, I will not take it even if you try to force me.

Upon further probing, two participants reported some degree of peer pressure. They used the Taiwanese slang “do-lan” (ㄉㄛˊㄌㄢˊ) to describe their feelings at that particular scenario. “Do-lan” usually reflects a person being forced or provoked to do something he/she loathes or despises.

Patterns of Drug Use—MDMA was reported to be the most popular drug used by all participants in both user groups. Ketamine, GHB, mushrooms, FM2, marijuana, and laughing gas were also reported by older participants. However, polydrug use was not as prevalent in the younger user group (Group 2). MDMA was typically taken orally. Ketamine was administered through snuffing, and was sometimes added to cigarettes for smoking. Although older participants stated that it was very difficult for them to estimate the lifetime number of MDMA pills taken, younger users were able to estimate lifetime MDMA pills used, and reported a total number of pills ranging from a couple of hundred to one thousand pills. They also perceived 400 MDMA pills lifetime as “moderate use”.

Older users and health professionals noted that there was a special drug use sequence widely practiced by Taiwanese polydrug users. In a single drug use episode, MDMA was usually the first drug used, followed by Ketamine and then marijuana. This sequence of polydrug use in a single episode was called a “Trinity”.

GI F1: Most of the people will use marijuana and K while using MDMA.

GI M5: In Taiwan, “Trinity” is the current fashion....You don't know what “Trinity” is? MDMA first, followed by K, and then finishing with marijuana [other participants nodded]Usually, we will do a “Trinity” in 10 to 20 minutes.

Regarding places for club drug use, some places like “KTVs”, “Head-shaked bars”, pubs, discos, hotels, motels, and public beaches were mentioned by users and health professionals. A “KTV” in Taiwan is a combination of karaoke and MTV, designed specifically for karaoke-singing. Inside a “KTV” are a number of rooms equipped with professional audio-systems and large-screen TVs. Taiwanese club drug users consider the “KTV” as an ideal place for activities including drug use and sex trade. People under the age of 18 are allowed to enter a “KTV”. In Taiwan, “head-shaked bars” refer to those places where people go to dance and use club drugs. The only difference between a “head-shaked bar” and an ordinary disco/pub is that the “head-shaked bar” owner implicitly permits their customers to use club drugs. After a police raid, the owners of the “head-shaked bars” relocate the bars or change their names. Hotels, motels, and public beaches were also favorite venues for club drug use, with motels mentioned as the most popular place for commercial sex. Private home parties were more common among younger drug users as they were not allowed to enter certain places, such as pubs, discos, and “head-shaked bars”.

Drug Effects

User groups reported that they felt “high”, relaxed, excited, and restless after using MDMA. Vivid illusions such as the feeling of “being knocked by musical notes” while listening to the music were also reported. Spiritual expressions such as “ren-wo-yi-chia” (人我一家) (the union of self and the outside world) were used by these respondents to describe the effects of MDMA.

Fatigue, headache, loss of energy, nausea, and profuse sweating often occurred shortly after the MDMA effects subsided. Participants reported a deterioration of memory functions and a

decrease in physical stamina after using MDMA for a few years. Some participants had seen cases of mental and physical disorders, such as psychotic and kidney problems, among their fellow drug users. Suicidal ideation was not endorsed.

GI F1: No, I did not have that kind of thought [suicidal thought].

GI F2: I had headache, felt dizzy and tired even after sleep.

GI M2: My friend got his kidney wrecked by taking too much MDMA; he had to take a long time to pee.

GI M3: A lot of people have profuse sweating.

GI M4: I only felt fatigued.

GI M5: No, no one thinks of suicide after taking MDMA.

Health professional (Female high school counselor): ...I noticed a case of mine getting irritated after taking MDMA, but not suicidal.

The “K-hole” is an effect described by Ketamine users from St. Louis, Miami and Sydney. Western K-users reported vivid out-of-body experiences described as being in a hole and not being able to get out. Although only one of the health professionals had heard of the “K-hole”, none of the Taiwanese Ketamine users were familiar with that experience.

One male explained that a prolonged use of MDMA would actually lead to a decrease in libido; however, older male participants stated that they had never used male enhancement drugs with MDMA, and only “rookies” would mix Viagra with MDMA to enhance sexual performance.

Attitudes Toward Club Drug Use

Users were passionate about their club drug use experiences. One female participant from the younger user group (Group 2) stated that non-users would never understand the feelings of using MDMA since the experience about drug use could only be acquired through personal exploration.

GII F2: You who have never tried will never know. You have to feel it with your heart.

According to the health professionals, club drug users generally viewed MDMA as a recreational drug which was not addictive. This view was also very common among students. However, not all of the users shared this belief.

GI M2: ...MDMA is not addictive, compared to heroin and amphetamine...

GI M3: All drugs are addictive. If MDMA was not addictive, I wouldn't have been here [in treatment]...

Health professionals (Female high school counselor): According to my cases, MDMA is a recreational drug. It is harmful only if you take too much.

Harm Reduction

Several harm reduction strategies were reported, users stated that they only use drugs with friends, to watch over each other during drug use, and to use drugs at home to avoid driving while high. Increasing water intake and exercising were also reportedly used to reduce the

harmful effects of MDMA and Ketamine. Generally, the physical problems caused by club drug use did not appear to be a concern to drug users.

GI M5: To use it at home, and to get some friends to use drugs together. In this way, we can take care of each other.

Health professional (Female high school counselor): ...to exercise, to drink a lot of water, and to get a buddy to watch over....

Though testing kits available in other parts of the world were not utilized, it was shocking to hear that young women were used as pill testers. Taiwanese drug users freely reported that in order to obtain firsthand information about drug effects, drug dealers often conducted their own drug tests on “volunteer” subjects (i.e., women who willingly allow themselves to work for dealers as testers). Terms such as “candy girl” and “dinosaur girl” were used to describe these females. “Candy girls” refer to attractive young female drug testers who also trade sex for drugs. “Dinosaur girls” are considered to be less sexually appealing. This is the first report of such behaviors to-date.

Health professional (Female social worker): Some people volunteer to try the drugs for the dealers in exchange for free drug.....People called the girls who test drug for the dealers “candy girls or dinosaur girls”.

Sources of Information Related to Drug Quality

In the past, drug quality could often be differentiated based on the imprinted logos on the pills. However, since the imprinted logos change so rapidly, they are often unreliable. All three focus groups indicated that the information provided by drug dealers was more reliable compared to that posted on the internet.

GI M4: Dealers won't give you fake stuff, because they want you to be their stable customers. There are vigorous competitions between drug dealers. They daren't give you rubbish.

GI M5: Do you know why people won't use the internet as a source of drug information? Why do they listen to the dealers? Because drug dealers will do drug testing after getting the drugs. They will get someone to try the drugs for them. Which color is the stronger one and which is not? The dealers know all about it. For if you browse the internet for this type of information, you will surely doubt what they say in the net. Also, you won't know the guy who wrote these things. To look at the pictures is like reading a book, well, I don't know what other people think, to me, I think it is not very accurate. So, for all I know, people all listen to what the dealers say. But, you have to try it yourself anyway.

Drug Acquisition

Club drugs can be bought from the dealers at the “head-shaked bars”, pubs, discos, and “KTVs”. Participants stated that it was relatively easy to get access to club drugs almost anywhere in Taiwan, especially in the urban areas. Most of the drug buyers were males. Female users were usually given drugs for free by fellow users and were not required to do anything in return.

GII F2: No one [i.e., females] will use it if it's not for free.

GII M3: Most of the customers are males....You can buy drugs at “Head-shaked bars”, pubs.

GIM5: ...you can get drugs [MDMA] at pubs, KTVs, discos, and the home of the drug dealers.

Recruitment and Interviewing Issues

There were substantial differences between health professionals and users in their comments and suggestions on the recruitment strategies related to our planned NIDA study. Health professionals were generally pessimistic about the feasibility of recruiting club drug users from the street because of legitimate legal concerns. Secondly they were concerned that users would not be honest about their history and pattern of use.

Health professional (Male social worker): Because it is illegal to use drugs [MDMA] in Taiwan, the possibility of disclosing their drug use experience to a stranger is very low. They won't tell you a lot if they don't know you well.

Drug users stated that their willingness to be cooperative during an interview depended heavily on the gender, age, and attitudes of the interviewer. It was preferable to have an interviewer who was of the same gender and was about the same age of the respondent. As with the present focus group study, safety and confidentiality were also concerns, though users acknowledged that the NBCD's "Certificate of Confidentiality" had already reduced their anxiety and would likely aid in recruitment. Questions refer to sexual behaviors as well as drug using behaviors and drug users were adamant about gender matching regarding sexual behaviors.

GII M3: You may go to the places we've mentioned here. To understand the situation there first. For example, what is the main age group there? Then you get someone about the same age of those people to do your interview.

GI F2: I prefer a female interviewer.

GI M5: If a girl asks me about whether I have anal sex or oral sex; I don't think I can answer honestly.

One goal of our focus groups was to understand users' perceptions and willingness to participate in a 4-phase study. When proposed plans were presented, users overwhelmingly responded positively, stating that they were extremely interested in the study. They were especially interested in the extent of damage to their brain after a prolonged use of club drugs. When younger users were first asked about whether they were willing to participate in the structured interview phase of the "Collaborative MDMA and Club Drugs" project, they expressed concern at being interviewed without experiencing any personal benefits.

GII F2: In fact, people will feel uncomfortable when you ask them for an interview like this... they will think that you are sent by the police to investigate something. Everybody out there is somewhat suspicious and paranoid....we are afraid of being arrested... [the first time they were asked about whether they would participate in a structured interview]

GII M3: ...after reading the advertisement on a newspaper? No, I don't think I'll trust it. It sounds like a set up by the police. Those who have used Ecstasy are afraid of the police....

However, when they learned about the possibility of participating in a brain imaging (MRI) study, everyone markedly changed their attitudes and expressed willingness to participate. Advanced technologies such as brain imaging appeared to be a tremendous recruitment aid to offset the negative perceptions of sensitive research studies in Taiwan.

GII M3: Yes, I'll do the interview.... [all younger user responded positively after knowing the brain imaging study]

GII M2: Because I want to know how bad the damage to my brain is. [younger users said that they would like to participate if the researcher could examine the damage of their brain]

DISCUSSION

This is the first report of the voices of non-detainee club drug users in Taiwan—a group traditionally felt to be unobtainable for sensitive research. A simple primary aim, of talking to drug users themselves, was met. A second aim was focused on modifying assessments for later phases of a NIDA funded club drug study in Taiwan. Focus group discussions obtained information about drug use experiences, attitudes, and beliefs pertaining to Taiwanese club drug users. Similarities and differences in the perceptions of current drug use between club drug users and health professionals were also examined. Finally, we tried to explore the potential recruitment strategies that would facilitate the implementation of large scale epidemiologic studies.

Several main findings were consistent with results obtained from other club drug studies. Young people were reported to be the main customers in the club drug market of Taiwan (e.g., Liu et al., 2005). Academic competence and performance were also found to be significant predictors of students' use of Ecstasy (e.g., Çorapçıoğlu and Ögel, 2004; Micheli and Formigoni, 2004). Further, the prevalence of substance use in vocational training school students was found to be higher than that among students of other schools (Lau, 2002).

Several novel findings need to be disseminated to the larger drug abuse community. Taiwanese club drug users developed a specific polydrug use sequence called “Trinity” (MDMA, Ketamine, and marijuana) that has not been reported elsewhere but that needs to be further explored. Two possible reasons explained the “Trinity” phenomenon: the particular sequence may result in a high that these users prefer or users may combine these drugs to offset any discomfort caused by MDMA. Past research has also shown that polydrug use is common among Western club drug users (e.g., Cottler, et al., 2001; Fendrich et al, 2003; Hammersley et al, 1999), though this Trinity sequence was not reported.

Another major finding was method used to test club drugs in Taiwan. Unlike drug testing methods that had been used in Western societies such as drug testing kits (e.g., adulterant screening kits), which could be bought anonymously from “www.dancesafe.org”, have not been available in Taiwan. To ensure the “safety” or “effects” of their drugs, Taiwanese drug dealers instead used “candy girls” and “dinosaur girls”. Club drug users in the focus group viewed this “human drug testing” as the most reliable method available to them, admitting no guilt in participating in such a practice.

Taiwan's geographical location and historical background also contributed to some distinctive drug use phenomenon not observed in the Western world. Specifically, Taiwanese club drug users considered the “KTV” as an ideal place for private activities including drug use and sexual activities. Considering the privacy provided by the “KTV” and the legality of admitting young people into it, it is no surprise that “KTVs” are popular among younger club drug users. It is surprising that the public forum was accepted in light of the danger associated with divulging information on personal drug use history.

Although Taiwanese drug users did not use the internet as a mean to obtain information about club drug, like users in other parts of the world, it is interesting to know that internet is the most reliable recruitment tool for the later phase of the study. One of the reasons for not using the internet data was that Taiwanese users generally did not trust the information provided by a source unknown to them. They might have also been suspicious and afraid that the National Criminal Police Bureau could discover and punish them.

Studies have suggested that use of MDMA affects depression, other mood disorders, impulsiveness or hostility, and other psychopathological disturbances (e.g., Carlson et al, 2004; Davison and Parrot, 1997; Travers and Lyvers, 2005). Depression following the use of

Ecstasy has commonly been known as “Suicide Tuesday”, and descriptions of it can be found on various web sites (e.g., http://en.wikipedia.org/wiki/Suicide_Tuesday). Although Suicide Tuesday was not reported by these users, its absence should not necessarily imply the absence of MDMA-related depression in this population. Cross-cultural studies on depression show that perceived cultural norms affect reporting of depressive symptoms (Okazaki and Kallivayalil, 2002). Chinese subjects tend to emphasize somatic symptoms, such as feeling fatigued and loss of energy, and to deemphasize affective distress, such as feeling blue, compared to American subjects (Stewart et al., 2002), suggesting that Taiwanese users might be attributing their depression to other somatic complaints.

Another cross-cultural discrepancy was the finding that peer pressure was not recognized as a main reason for drug use. Peer pressure has long been recognized as one of the major factors for the initiation of drug use in Western societies (e.g., Arata et al, 2003; Morrison and Smith, 1987). To Taiwanese users, the motive to conform is usually to maintain the harmony within a group. This type of schema has been globally described as interdependent, high-context, or collectivistic (Lau, 1988; 1992). Therefore, when Taiwanese users were asked about whether they felt any pressure to use drugs from their peers, they said “no” because they wanted to conform to the group's norm.

Regarding the recruitment strategies for our epidemiologic study, it was suggested that interviewers' gender, age, and attitudes might be the crucial factors in gaining cooperation from respondents. A strong incentive, meaningful to the drug users, might enhance younger club drug users' willingness to participate. An examination of the extent of brain damages using imaging techniques (e.g., MRI) seems to be the strong incentive relevant to younger users. This appears to be the first example of such in the research literature.

Though the findings from these focus groups may be considered limited in terms of their generalizability, they represent a snapshot and a voice that has not been seen or heard previously. The information obtained in this study is the first step in understanding club drug use patterns among an understudied, hidden and vulnerable population. The results bode well for future cross-cultural studies of out-of-treatment Taiwanese drug users.

ACKNOWLEDGEMENT

This study was supported by the National Institute on Drug Abuse (N01DA-4-47739—Linda B. Cottler, PI). The second author Dr. Jih-Heng Li has equal contribution to this paper as the first author. We thank the staff at the National Bureau of Controlled Drugs of Taiwan and the Nonprofit organizations for their assistance in recruitment and coordination. We gratefully acknowledge the assistance from Dr. M.J. Ho of National Yang Ming University, Taiwan and Ms. Kathryn Tung. We also thank the individuals who volunteered their time to take part in the study.

Biographies

Kit-Sang Leung, Ph.D., MPE, (corresponding author) is a research instructor in the Department of Psychiatry at Washington University School of Medicine.

Jih-Heng Li, Ph.D., was the Director-General of the National Bureau of Controlled Drugs, Department of Health, Taiwan, at the time the focus groups were conducted. Dr. Li is now the Specialists-General of the Department of Health, Taiwan.

Wen-Ing Tsay, MS., is the director of the Epidemiology and Education Division, the National Bureau of Controlled Drugs, DOH, Taiwan.

Catina Callahan, MSW, is a project director in the Department of Psychiatry at Washington University School of Medicine.

Shu-Fen Liu, MPH, is the Senior Technical Specialist of the Epidemiology and Education Division, the National Bureau of Controlled Drugs, DOH, Taiwan.

Jiu Hsu, MSEHS, is the Assistant Technical Specialist of the Epidemiology and Education Division, the National Bureau of Controlled Drugs, DOH, Taiwan.

Lee Hoffer, Ph.D., MPE, is a research instructor of Medical Anthropology in the Department of Psychiatry at Washington University School of Medicine.

Linda B. Cottler, Ph.D., is a professor of Epidemiology in the Department of Psychiatry at Washington University School of Medicine in St. Louis and the director of the Epidemiology and Prevention Research Group (EPRG) at Washington University.

REFERENCES

- Arata CM, Stafford J, Tims MS. High school drinking and its consequences. *Adolescence* 2003;38:567–579. [PubMed: 14768998]
- Bogenschutz MP. Drugs on the Internet. *American Journal of Psychiatry* 2001;158:12.
- Carlson RG, McCaughan JA, Falck RS, Wang J, Siegal HA, Daniulaityte R. Perceived adverse consequences associated with MDMA/Ecstasy use among young polydrug users in Ohio: implications for intervention. *International Journal of Drug Policy* 2004;15:265–274.
- Cottler LB, Womack SB, Compton WM, Ben-Abdallah A. Ecstasy abuse and dependence among adolescents and young adults: applicability and reliability of DSM-IV criteria. *Human Psychopharmacology* 2001;16:599–606. [PubMed: 12404539]
- Çorapçioğlu A, Ögel K. Factors associated with Ecstasy use in Turkish students. *Addiction* 2004;99:67–76. [PubMed: 14678064]
- Davison D, Parrott AC. Ecstasy (MDMA) in recreational users: self-reported psychological and physiological effects. *Human Psychopharmacology: Clinical & Experimental* 1997;12:221–226.
- Fendrich M, Wislar JS, Johnson TP, Hubbell A. A contextual profile of club drug use among adults in Chicago. *Addiction* 2003;98:1693–1703. [PubMed: 14651501]
- Glaser, BG.; Strauss, AL. *The discovery of grounded theory: Strategies for qualitative research*. Aldine; Hawthorne, NY: 1967.
- Glaser BG. Conceptualization: On theory and theorizing using grounded theory. *International Journal of Qualitative Methods*, 1. Article 3. 2002Retrieved April 6, 2005, from <http://www.ualberta.ca/~ijqm/>
- Halpern JH, Pope HG. Hallucinogens on the Internet: a vast new source of underground drug information. *American Journal of Psychiatry* 2001;158:481–483. [PubMed: 11229993]
- Hammersley R, Ditton D, Smith I, Short E. Patterns of ecstasy use by drug users. *British Journal of Criminology* 1999;39:625–664.
- International Narcotics Control Board. *Report of the International Narcotics Control Board for 2002*. United Nations; New York: 2003.
- Johnston, LD.; O'Malley, PM.; Bachman, j. G.; Schulenberg, JE. *Monitoring the Future national survey results on drug use, 1975-2003: Volume II, College students and adults ages 19-45*. National Institute on Drug Abuse; Bethesda, MD: 2003. NIH Publication No. 04-5508
- Lau, JTF. *The 2000 survey of drug use among students*. Narcotics Division, Security Bureau, Hong Kong Government; 2002.
- Lau S. The value orientations of Chinese university students in Hong Kong. *International Journal of Psychology* 1988;23:583–596.
- Lau S. Collectivism's individualism: value preference, personal control, and the desire for freedom among Chinese in Mainland china, Hong Kong, and Singapore. *Personality and Individual Differences* 1992;13:361–366.
- Liu C, Huang M-K, Tsay W-I, Liu RH, Li J-H. Use of MDMA and marijuana among arrestees in Taiwan – A survey based on laboratory test of urine specimens. *Journal of Food and Drug Analysis* 2002;10:107–111.

- Lua AC, Lin HR, Tseng YT, Hu AR, Yeh PC. Profiles of urine samples from participants at rave party in Taiwan: prevalence of ketamine and MDMA abuse. *Forensic Science International* 2003;136:47–51. [PubMed: 12969619]
- Micheli DD, Formigoni MLOS. Drug use by Brazilian students: associations with family, psychosocial, health, demographic and behavioral characteristic. *Addiction* 2004;99:570–578. [PubMed: 15078231]
- Ministry of Justice. Monthly Abstract Statistics on Criminal Offenses. 2001. Retrieved April 12, 2005, from <http://www.moj.gov.tw/tpms/internet/newdata/newtable4.pdf>
- Ministry of Justice. Monthly Abstract Statistics on Criminal Offenses. 2005. Retrieved April 12, 2005, from <http://www.moj.gov.tw/tpms/internet/newdata/newtable4.pdf>
- Morrison MA, Smith QT. Psychiatric issues of adolescent chemical dependence. *Pediatric Clinics of North America* 1987;34:461–480. [PubMed: 3550660]
- National Bureau of Controlled Drugs. Statistics on drug abuse and persecution. 2005. Retrieved March 7, 2005, from <http://www.nbcd.gov.tw/statistics/9404.pdf>
- Okazaki S, Kallivayalil D. Cultural norms and subjective disability as predictors of symptom reports among Asian Americans and White Americans. *Journal of Cross Cultural Psychology* 2002;35:482–491.
- Parrott AC, Milani RM, Parmar R, Turner JD. Recreational ecstasy/MDMA and other drug users from the UK and Italy: Psychiatric symptoms and psychobiological problems. *Psychopharmacology* 2001;159:77–82. [PubMed: 11797073]
- Patton, MQ. Qualitative evaluation and research methods. Sage Publication; Newbury Park, CA: 1990.
- Robins, LN.; Cottler, LB. The substance abuse module (for the DIS and CIDI). Washington University; St. Louis, MO: 1990.
- Stewart SM, Lewinsohn PM, Lee PWH, Ho LM, Kennard B, Hughes CW, Emslie GJ. Symptom patterns in depression and “subthreshold” depression among adolescents in Hong Kong and the United States. *Journal of Cross Cultural Psychology* 2002;33:559–576.
- Substance Abuse and Mental Health Services Administration. Results from the 2002 National Survey on Drug Use and Health: National Findings. Office of Applied Studies; Rockville, MD: 2006. NHSDA Series H-30, DHHS Publication No. SMA 06–4194
- Travers KR, Lyvers M. Mood and impulsivity of recreational Ecstasy users in the week following a “rave”. *Addiction Research and Theory* 2005;13:43–52.
- Topp L, Hando J, Dillon P, Roche A, Solowij N. Ecstasy use in Australia: Patterns of use and associated harm. *Drug and Alcohol Dependence* 1999;55:105–115. [PubMed: 10402155]
- Twinn S. An analysis of the effectiveness of focus groups as a method of qualitative data collection with Chinese populations in nursing research. *Journal of Advanced Nursing* 1998;28:654–661. [PubMed: 9756235]
- United Nations Office on Drugs and Crime. World Drug Report 2004. 2004. Retrieved March 23, 2005, from http://www.unodc.org/unodc/en/world_drug_report.html
- Yelland J, Gifford SM. Problems of focus group methods in cross-cultural research: a case study of beliefs about sudden infant death syndrome. *Australian Journal of Public Health* 1995;19:257–262. [PubMed: 7626676]

Table 1

Demographic Characteristics of User Group Participants

Demographics	Group 1		Group 2		Total	
	%	N	%	N	%	N
Race/Ethnicity						
Taiwanese	100	7	100	5	100	12
Gender						
Male	71.4	5	60.0	3	66.7	8
Female	28.6	2	40.0	2	33.3	4
Area Group Up						
City	71.4	5	60.0	3	66.7	8
Rural	28.6	2	40.0	2	33.3	4
Educational Level						
University or College	0	0	0	0	0	0
Associate Degree	14.3	1	0	0	8.3	1
High School Diploma	42.9	3	60.0	3	50.0	6
Vocational Tech School Diploma	28.6	2	10.0	1	25.0	3
Junior High School or Elementary Diploma	14.3	1	10.0	1	16.7	2
1st Club Drug Used						
MDMA	42.9	3	66.7	4 ^a	53.9	7 ^a
Ketamine	28.6	2	33.3	2 ^a	30.8	4 ^a
GHB	14.3	1	0	0	7.7	1
Others	14.3	1	0	0	7.7	1
Person Introduced to Use						
Friend(s)	71.4	5	60.0	3	66.7	8
Classmate(s)	14.3	1	20.0	1	16.7	2
Girl Friend/Boy Friend	14.3	1	20.0	1	16.7	2
Mean Age (range)	25.6 (25-30)		19.8 (18-23)		24.3 (18-30)	
Mean Age of 1st Use of Club Drug (range)	22.4 (15-29)		17.0 (15-19)		20.2 (15-29)	

^a One participant reported using both MDMA and Ketamine upon initiation.

Table 2

Focus Group Domains and Topics

Domains	Topics
Profiles of Users	Describe the typical user: Gender, age range, race of users; clothing used; polydrug users; gateway drug vs. just one of many; slang describing use; school performance of users; other characteristics; social networks; and dealers
Drug Effects	What people like about each of them; effects while using each type; overdosing; withdrawal effects; sexual activity while using; expectations of use; motivations for using; PLUR and social revolution; and perceptions of harm
Acquisition and Use	Which drugs are most popular; how these drugs are obtained; change in availability over time; cost; route of administration; setting for use; quantity/frequency of use; picture cards to determine which "brands" are used; over the counter or other illicit booster drugs; simultaneous vs. concomitant use of other drugs; intended vs. spontaneous use of these drugs- and which ones
Addictive Properties	Describe physical symptoms, psychological symptoms; feeling of tolerance, short-term vs. long term withdrawal; the perception of dependence from using each type of drug; compulsions to use; craving; what are their notions about harm reduction; and loss of control
Recruitment Strategies	Methods to reduce users' anxiety, suggestions for recruitment, places for recruitment, places to avoid, and incentives for respondents